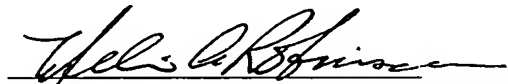


**REMARKS**

The foregoing amendments to the specification and claims under Article 41 of the Patent Cooperation Treaty place the application into a form for prosecution before the U.S. Patent and Trademark Office under 35 U.S.C. §371. Accordingly, entry of these amendments before examination on the merits is hereby requested.

Respectfully submitted,



Melvin A. Robinson (Reg. No. 31,870)  
Patent Department  
Schiff Hardin LLP  
6600 Sears Tower  
Chicago, Illinois 60606  
Telephone: 312/258-5785  
**CUSTOMER NO. 26574**

ATTORNEY FOR APPLICANT

**IN THE DRAWINGS**

Enclosed herewith is a copy of two sheets of drawings showing Figures 1 and 2 as originally filed in this PCT application. Also enclosed is a copy of Figure 2 in which the German language text of the original drawing has been replaced by the English translation. Entry of the translated drawing is hereby requested.

5

SPECIFICATIONTITLE

"METHOD FOR AUTOMATICALLY ELIMINATING AN ERROR OCCURRING ERRORS DURING THE OPERATION OF AN ELECTROGRAPHIC PRINTING PRINTER OR COPYING COPIER DEVICE, ELETROGRAPHIC PRINTING OR COPYING AND ELECTROGRAPHIC PRINTER OR COPIER DEVICE AND COMPUTER PROGRAM FOR SAID DEVICE"

BACKGROUND OF THE INVENTIONField of the Invention

The present invention relates generally to an electrographic printer or copier device method and apparatus and, in particular, to a method for eliminating errors during operation of an electrographic printer or copier device as well as to a printer or copier device that eliminates errors and to computer program therefor.

Description of the Related Art

Printing or and copying devices (called which are referred to generally as printing devices in the following) comprise a plurality of components as a rule, in which every present disclosure) typically include a number of component systems for a printer and each component system is composed of several modules. The Examples of such component systems include the printing component and component system, the input component or, respectively, system and the output unit for print material are examples. This type of printing device, for instance, can be learned from WO 98/18052 A1. Therein the printing component contains component system. An example of a printing device is disclosed in PCT International published patent application WO 98/18052 A1. This device includes a printing component system having two printing modules, for example. The printing modules each

SUBSTITUTE SPECIFICATION

include a photoconductor drum, a transfer module, a fixing module, and a module for determining the transitpaper transport path for print material through the print component, etc. Additionally, further components are the printable media through the printing component system. Further component systems are also provided such as an input module essystem and an output modules, such as withsystem which may, for example, include a stapler as a module in the output system.

In such a printing device devices of this type, errors can occur during the operation of the printer that need to be eliminated. For instance in the transit path, congestion can occur in the printable medium transport path in, for example in the transfer module, or arranged in the switch module switching module or in the fixing module. To eliminate these types of errors, it is known from WO 98/18055 A1 that a valve arrangement can the PCT International published patent application WO 98/18055 A1 discloses a shutter device to provide access to the transit path. A realization of this valve arrangement is specified here, transport path. The reference discloses the construction of the shutter device as well as other adjustments that allow access to the transittransport path in the aforementioned prior art. To eliminate the congestion of printthe printable materials in these valve arrangements the shutter device, service personnel operating the valve arrangement are needed to operate the shutter device.

US-5-479-240 A specifies how According to US Patent No. 5,479,240, an error such as, a paper jam or congestion can be eliminated in a copying device without an operator having to intervene. TheAccording to this patent, the following steps need to must be carried out: initially an An initial examination will is made to determine whether if the error paper jam can be eliminated automatically. If this is not the case, a manual elimination of the problem will be called for. if If the error can be eliminated automatically, sensors will determine in

SUBSTITUTE SPECIFICATION

which component system the error appeared. If the component system has been identified, ~~the component system~~ will be initiated by a CPU, for instance, started by the control unit to transport ~~any~~ damaged sheets of paper further. If ~~that transit~~ the transport effort is not successful within a predetermined period of time, a manual error correction is ~~switched to~~, if ~~the transit~~ must be performed. If the transport of the damaged paper through the component system has been ~~succcessfully implemented~~, successful, a further transit through succeeding components will be attempted in a corresponding manner until the damaged sheet of paper reaches the output component.

~~EP-0~~ The published European published application EP 0 810 484 A1 specifies discloses a transport system for ~~print~~ printable material in which individual components of the transport system can automatically execute a task after they ~~have received~~ receive control information from a central control unit. The components are designed such that they can implement a self-diagnosis and a self-repair ~~in which these~~. These actions ~~ensue~~ occur in parallel ~~manner to~~ with that of the central controller. If the central control unit has ~~established~~ determined that an error exists, it gives control information in which the type of error that has occurred is specified to the components. This information enables the components to eliminate the error automatically.

~~EP-0~~ In the published European published application EP 0 416 919 A2 ~~discloses~~ the A2, a synchronization between the image sampling and paper transport in a copier device, is disclosed. If it is ~~established~~ determined that the transport of the paper is too slow, the copying process will be stopped.

~~EP-0~~ In the published European published application EP 0 583 928 A2 specifies A2, a device in which the paper feed can be monitored in the ~~transit path~~. ~~For that the~~ transport

SUBSTITUTE SPECIFICATION

path of a printer device is disclosed. The rotation speed of the transport rollers for the carrying the paper is measured. If the measured rotation speed does correspond to a predetermined valueshutter device, an error message is generated.

### **SUMMARY OF THE INVENTION**

The problem forming the basis of thepresent invention to specify a further method with which errors occurring in the print device, such as, for example, a jam of the print material in theprovides a method for correcting an error in a printing device, such as a jam in the printable medium which occurs in a transport path, can be corrected without activation ofcalling on service personnel. This problem is solved according to the features of claim 1 and other features and advantages of the invention are provided by a method for automatically eliminating errors occurring during the operation of an electrographic printer or copier device. The method provides that upon the occurrence of an error in a component, a determination is made as to whether the error can be automatically corrected in a main error correction mode. In case the error can be corrected, the individual modules are switched to an error-correcting mode in succession, otherwise the main error correcting mode is ended. The modules are tested in the opposite direction to the flow of the printable materials along the transport path.

In particular, a query is sent to the component system for a module to correct the error. If this is successful or if no error is present, a status signal indicating that the “error has been corrected” is transmitted, otherwise the status signal the “error is not corrected” is transmitted. In case the module transmits the status signal that the error has not been corrected, a determination is made as to whether the operation can proceed without this module and, if so, the status signal “operation is possible” is transmitted, otherwise the status

**SUBSTITUTE SPECIFICATION**

signal "error is not corrected" is transmitted. After each of the modules has been queried according to the foregoing, if an occurrence of a status signal indicating the "error has not been corrected" occurs in at least one module, the error correcting mode is ended and the module which registers the error is reported. Otherwise, the error correcting mode ended and a status signal is transmitted that the error has been corrected.

With the method the Module control units provided provide for the operation of the units modules and are under the supervision of a main control unit, these module control units are used to check the modules of the unit for errors and, if a correctable, If an error is determined, to be correctable, the modules are instructed to correct this error. It can thereby advantageously be checked per unit of the error. It is advantageous to check each module of each component system in succession, whereby given the correction of a print material error it is appropriate and, in particular, to begin with that the last module (as viewed in the paper transport direction of the printing material) and to successively test the adjacent and preceding modules. At the end of the test even the error(s) is/are for the correction of the printable material error. At the completion of testing, either the error has been corrected or a status signal "error(s) is/are not corrected" is emitted. Another advantage is that, given an erroneously working module, it is checked whether the operation is also indicating that the "error was not corrected" is transmitted. According to one aspect of the invention, if one of the modules has an operating error, a determination is made as to whether it is possible to operate the printing device without this module and when this is possible, if so, to provide a report this as such.

Developments of the invention result from the dependent claims.

SUBSTITUTE SPECIFICATION

~~The~~Thus, an error correction ~~can~~may be carried out separately ~~per~~for each component ~~system~~in this manner. It is, ~~however also,~~ possible to test all of the components, one after another, in the ~~opposing direction~~ opposite that of the paper transport path ~~of the print material~~direction on a module-by-module manner and to correct possible ~~identified errors,~~ if possible.

~~The invention is further exemplified using an exemplary embodiment.~~

~~Depicted:~~

~~Fig. 1— a principle illustration of a printing device for single sheets of the printing material corresponding to WO 98/18052 A1.~~

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 is a side view of a printer apparatus for printing single sheets of printed material and showing in block diagram a controller system for use by the present method; and

~~Fig.~~Figure 2 is a flow diagram of ~~illustrating~~ the method ~~of the present invention.~~

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

~~A~~In Figure 1 is shown a printing device~~apparatus~~ for printing single sheets of print material as clarified explicitly in WO 98/18060 A1 ~~results from Fig. 1. Only the components usable for the specification of the inventions are given, for the rest refer to WO 98/18060 A1, which is included herewith in this disclosure. The~~printed material. The illustrated printer is of a type as disclosed in the PCT published patent application WO 98/18060 A1; however, a controller system for carrying out the present method has been added. Only the components of the printer which are applicable to the present invention are described herein. For other



component system descriptions, refer to the PCT published application WO 98/18060 A1, which is incorporated herein by reference.

A printing device DR is comprised, according to Fig. 1, of, as shown in Figure 1, includes three components: the a printing component system 10, the an input component 16, system 16 for inputting printable media and the an output component system 30 for the printing outputting printed material. The printprinting component system 10 is assembled from modules. For example, along the transittransport path 50, 50 and 52 lie printprintable material switch modules W, two printing groups D1 and D22, and fixer modules 12 and 14, respectively of known design. 14. Construction of these modules is well known. The printing groups D1 and D2 can be realizedconstructed as electrographic printing groups that compriseinclude a photoconductor drum on which charge images of the-images to be printed are generated in a known manner that are. The charge image is developed with a toner and is transfer printed onto the printprinting material after development via toner inby transfer modules 44 and 46. Aided by the The switch module W, the assists in feeding single sheets of printprintable material can be fed to the printing groups D1 and D22, either separately or sequentially, for printing on the front and/or back of the backside paper. The in-[sie]input and output components 16 and 30 for printthe printable materials are assembled from modules as well. Resulting from Fig. 1 areAs is apparent in Figure 1, the output switch modules W through which the sheets of printprintable material can beare conducted [sie]include output containers 32 through 36 or may have output channels at thewhich lead to following units such as staplers or, respectively, the like. The input switch modules W move printable materials from the input component 16 that includes supply containers 18 through

24 for the pages of print material, to be printed and an input channel 26 through which print material to be printed can be supplied from other input units are shown in the input unit 16.

The individual components of the printing device system DR are respectively controlled by component control units ST, the. The print component 10 is controlled by a print control component control D-ST, the input component 16 is controlled by an input control component control E-ST and the output component 30 is controlled by the output component control component A-ST. These control components component controls ST are linked with a main control component H-ST that coordinates the operation of the print device. The control components component controls ST are of known a know design and are therefore are not described further specified. Examples of which result from WO 98/39691 A1, such control units are set forth in PCT published application WO 98/39691 A1.

If an error occurs in the transport transporting of print material into be printed through the print device DR, such as a paper jam of print the printable material, it must be determined in which component and in which module of the appertaining unit component the error has occurred. Furthermore, it must be determined whether the error is correctable without the intervention of service personnel. Control components ST (that prior emitted "The component controls ST are active and emit error reports" upon upon the occurrence of such errors and forward these error reports to, for example, a main control component H-ST, from which it can be recognized where the error occurred) are activated. The goal of this invention is now to use the error reports to a main control H-ST so that the location of the error can be recognized. Advantageously, the present method enables these error reports to be used to automatically eliminate errors when possible. The prerequisite is that an error. For this to

occur, the error must be one that can be corrected without the intervention of service personnel exists in a module.

If, ~~for~~ For example, if an error exists in a particular switch module W, ~~it an attempt~~ can be attempted made to clear the transit path for the print material by a change to paper transport path by changing the switch position. If this is not possible, ~~it an attempt~~ can be attempted made to choose another paper transport path via the adjustment of another switch module W. ~~The same can be proceeded with when an error occurs~~ These same procedures can be applied for errors which occur in a printer group or in a fixing module. ~~Here it~~ An attempt can be also be tried made to correct ~~this~~ the errors or to search for another transit transport path.

~~From~~ With reference to the flow chart of Fig. 2 ~~it results how it must be followed in order to~~ Figure 2, the process for correction of an error, for example, automatically correct an error in the transport path ~~offor the printing~~ printable material. is shown. The process flow is depicted from point of view the viewpoint of the main control component H-H-ST. It is assumed, ~~for example in the explanation,~~ for purposes of the present example that the error exists in the print unit 10. printer unit 10.

After it has been determined A determination is made in step S1, for example, by the print control component D-ST, 1 that an error has occurred in the transit paper transport path of the print material which passes through the printing unit 10, in step S2 a 10. This determination is made by the print component control D-ST. In step S2, the main error correction mode is switched ~~to on~~ on and it is tested a test is run as to whether the error can be automatically corrected. For this determination, the error is reported to the main control component H-H-ST, which decides whether the error correction will be attempted ~~thus,~~ Thus, for example, a determination is made as to whether the error is correctable in the fixing

module 12 and, if ~~this~~ it is not possible to correct the error, whether another ~~transit~~transport path ~~to a fixing module~~ can be set to the fixing module. If this is not the case, then the ~~method~~error correcting efforts for this particular print group is ended and an error report F1 is ~~dropped off~~ generated and supplied to the main control component ~~H-H~~ST so that, in a step S 16, the main error correcting mode ends ~~the main error correcting mode~~ and sends a status-signal F status F is sent indicating that the error has not been corrected.

If the error is automatically correctable (according to step S2), ~~2~~, the corresponding control-component ~~D-control~~ D-ST is changed to the error- correcting mode (as shown in step S3), ~~3~~. In the next~~subsequent~~ step S4~~4~~, a command is ~~emitted~~transmitted by the control-component ~~D-control~~ D-ST to the module that lies at the output ~~relative to the transit path of the print material~~, said of the paper transport path. The command ~~prompting~~prompts this module, which is, for example, the switch module W-4, ~~4~~ to empty the paper transport path ~~for the printing material~~. In the next, Thereafter, in step S5, the module attempts to clear the ~~transit~~transport path. Whether this was possible is ~~examined~~determined in Step~~step~~ S6. If the error can be corrected, the assigned control-component ~~D-control~~ D-ST sends the status signal SS1 or "error corrected" in step S7. In step S8 ~~it~~ 8, a query is ~~queried~~issued as to whether all modules of the component are processed. If this is not the case, the process proceeds to step 9 follows ~~and the next module (viewed in opposite~~ the reverse direction to the paper flow path of the print material), for instance ~~fixing module 14~~, receives a command to examine and, if necessary, to clear the transit path, ~~with the result that step S5 is reverted to~~ transport path. For example, this next module for the error connection (which is the preceding module from the paper transport direction) might be the fixing module 14. After this occurs, the result reverts back to step S5. In the step S9, the status of the previously

examined module can also be ~~additionally~~ communicated to the next module. When, as illustrated in step S6, it ~~is~~ has been established that ~~the~~ an error cannot be corrected ~~(, such as using the status signal SSF), even~~ though the preceding module can use the ~~transit~~ transport path ~~(step S10), as indicated in Step S10,~~ then in step S11 a status signal (SS2) ~~is emitted that states is transmitted in step S11 to indicate~~ that the error cannot be corrected, ~~however but that the transit~~ transport path is clear. If this is not possible, a status signal SS3 ~~emitted is transmitted~~ in step S12 ~~denotes~~ 11 to indicate that the error correction has failed and ~~that the transit~~ transport path through ~~this~~ the module is blocked.

If the ~~query~~ inquiry in step S8 ~~results in~~ determines the error modes of that all modules of the ~~print~~ printer component 10 are processed, then in step S13 ~~13,~~ the status of all tested modules can be evaluated and, in step S14 ~~14~~ it can be ~~tested~~ determined whether all modules were successful in the correction of the error. If this is the case, then in step S15 a status signal SS4 "indicating that the error correction mode has ended" is sent out and the ~~print~~ printer device DR ~~is~~ possibly restarted. When the ~~query~~ inquiry in step S14 ~~is~~ provides a negative result, then the error signal F2 is sent with the consequence that, for example, the main control component ~~H-H~~ ST stops the ~~print~~ printer device ~~(Status, The status signal F "is transmitted that indicates that the error has not been corrected")~~.

~~This~~ The present method has been explained ~~via the~~ by an example of ~~printa~~ printer component 10. ~~Input~~ The input component 16 or, ~~respectively,~~ the output component 30 or other components of a printer or copier can be treated comparably. Furthermore, it is also possible to initiate the test within a component.

In conclusion, the method can be applied ~~such~~ so that ~~the~~ an entire printing device is tested, the testing initially testing the modules of the output component 30 for ~~print~~ the printed

material, then testing the modules of the printing unit 1010, and finally testing the modules of the input component 16.

The ~~in~~ventive method can be effected via a device control ~~off~~or an electrographic ~~printing~~printer or ~~copying~~copier device that ~~comprises~~includes electronic components such as hardware and firmware and, (as the case may be), a processor ~~on~~in which the ~~corresponding~~a computer program runs. ~~Computer.~~ The computer program ~~products such as,~~ including computer programs stored on storage media (such as computer diskettes, CD-ROMs, magnetic tapes, optical storage platters, etc.)disks, and hard disks are therefore equally ~~embodiments~~within the scope of the present invention likeas well as computer program files thatfor performing the methods which are maintained on such storage media and/or which are exchanged or distributed over computer networks (such as LAN, WAN, and the Internet).

Summarized, the following can be established:

Errors that ~~occur in the transit path of print material~~which occur in a paper transport path or transport path for other materials to be printed or copied within an electrographic printing or copying device are automatically corrected as much as possible with the ~~specified~~this method. ~~For this the single~~ The individual modules of components of the printing device are tested in a direction counter to the direction of the ~~transit path of print material~~paper or media transport, one after another, with the result that a module ~~can~~may be able to or ~~can~~may not be able to eliminate the error, whereby in the case a second test is run as In case the error cannot be eliminated, a further test is established to determine whether ~~this~~the module having the error can be bypassed. A status report is generated at the end of the ~~test~~testing process for every examined module and, ~~dependent~~depending on the results, the printing process is initiated again or the printing device is stopped.

Although other modifications and changes may be suggested by those skilled in the art, it is the intention of the inventors to embody within the patent warranted hereon all changes and modifications as reasonably and properly come within the scope of their contribution to the art.

Reference list:

DR-	Printing or Copying device
D1, D2	Printing groups
W	Switch module
H-ST	Main control unit
D-ST	Print control component
E-ST	Input control unit
A-ST	Output control unit
SS	Status signal
SSF	Status signal "error not corrected"
F	Error signal = status signal "error not corrected"
S1 through S16	Processing steps
10	Print component
16	Input unit for print material
30	Output unit for print material
12, 14	Fixing module
44, 46	Transfer module
50, 52	transit path for print material



**WE CLAIM:**

**Patent**

Cancel claims 1 – 12 and insert new claims 13 – 23 as follows.

1. ~~Method 13.~~ (New) A method for automatically eliminating an error occurring during the operation of an electrographic printing or copying device, ~~electrographic printing or copying device and computer program for said device,~~comprising the steps of:
- a) ~~at upon~~ the occurrence of an error in a component ~~the main error correction mode~~ determines in the electrographic printing or copying device, determining whether the error can be automatically corrected; ~~b) in the a main error correction mode;~~
- in case that the error can be corrected, single~~switching individual~~ modules of the querying component ~~are switched to an error \_correcting mode in succession, otherwise;~~
- in case the error cannot be corrected, ending the main error \_correcting mode ~~is ended;~~
- e) ~~queried~~querying components in which the modules are tested in the opposite direction of the print materials' path ~~are handled according to the following measures: a sequence opposite to that of a printable media transport direction, said querying including,~~
- ~~the module receives the~~transmitting a command to correct the error; to a module,
- ~~if this~~transmitting a status signal indicating that the error is corrected if the error correction is successful or if no error is present, ~~a status signal "error corrected (SS1)" [sic] is emitted,~~ otherwise ~~the~~transmitting a status signal "indicating the error is not corrected (SSF)" [sic] is emitted;
- d) ~~in the case that the module emits~~if the status signal "indicating that the error has not been corrected" (SSF), is transmitted, making a determination ~~is made as to~~ whether operation of the electrographic printing or copying device can proceed without ~~this~~the module, ~~then that has the error and, if so, transmitting a~~ status signal (SS2) "indicating

~~that operation is possible” is emitted, otherwise the~~transmitting a status signal (SS3)  
~~“that the error is not corrected” is emitted further; and~~

e) ~~if after handling all of the modules in respective step d) effected by the error, the occurrence of status signal “indicates that the error has not been corrected” in at least one module, then ending the error \_correcting mode is ended and the module registering an error is reported (error signal F) and the error correcting mode is otherwise ended and a status-signal (SS4) “error corrected” is emitted and reporting the module registering the error, otherwise ending the error-correcting mode and transmitting a status signal indicating that the error has been corrected.~~

14. (New) A method as claimed in claim 13 further comprising a step of:

2. ~~Method for claim 1, in the case that~~in case ~~a module emits the~~indicates a status signal (SSF) “showing that an error has not been corrected”, a determination is made,  
determining whether the module can be bypassed; and

if the module can be bypassed, then the status-signal (SS2) “operation possible” is emitted,  
~~otherwise the status-signal (SS3) “error not corrected” is further emitted.~~transmitting a status signal indicating operation possible, otherwise transmitting a status signal indicating error not corrected.

15. (New) A method as claimed in claim 13, further comprising a step of:

3. ~~Method according to claim 1 or 2, in which the action of the~~controlling error  
~~correction is controlled by a-respectively dedicated control unit of the~~a querying  
~~component that is controlled by its-respective main control unit (H-ST) of the printing-~~  
~~or-copying device.~~a main control unit of the printing or copying device.

4. ~~Method according to any of the preceding claims, in which the command “correct error” and simultaneously the status-signal is directed to the following module after testing of the preceding module.~~

5. ~~Method according to any of the preceding claims, in which multiple consecutively assigned components of the printing or copying device (DR) are tested separately.~~
16. (New) A method as claimed in claim 13, further comprising the step of: separately testing the plurality of consecutively arranged components of the printing or copying device.
17. (New) A method as claimed in claim 13 further comprising the step of:
6. ~~Method according to any claims from 1 through 5, in which multiple~~initiating testing of a plurality of consecutively assigned~~arranged~~ components of the printing or copying device (DR) ~~initiate testing~~beginning with the~~a~~ last component in view of the~~a~~ direction of the transit path of the print material~~printable media transport path and proceeding through to the~~ first component~~in the printable media transport flow path.~~
7. ~~Method according to any of the preceding claims, in which input—[sic] output components (16, 30) of the print materials are used as~~
18. (New) A method as claimed in claim 13 wherein said components of the printing or copying device include input components and output components for printable media.
8. ~~Method according to claim 7, in which a print component (10) comprises~~
19. (New) A method as claimed in claim 18, wherein print components are disposed in multiple printing groups (D1, D2), between these and the~~said~~ input ~~or, components and said~~ output components (16, 30)~~and further comprising at least one switch module (W) [sic] so arranged, that different transit paths can be set for the print material~~so that a plurality of transport paths are defined for printable media.
9. ~~Method according to any of the preceding claims regarding the correction of~~
20. (New) A method as claimed in claim 13 wherein said modules are transport modules for transporting printable media and a correction is undertaken to correct a paper jam of at

least one sheet of print material, whereby the modules are transport modules. the printable media.

~~10-21. (New)~~ Use of the method according to claims 1 through 9 for error corrections that occur in modules in the transit path of print material. for correcting errors in modules in a printable media transport path of an electrographic printing or copying device, comprising:

~~11. Electrographic printing or copying devices with means to execute the method according to claims 1 through 9.~~

~~12. Computer program products, that via their use in a controlling computer execute the method according to claims 1 through 9.~~ **Schaumburg Thoenes Thurn Landskron**

**New PCT Application**

**Case No. P04,0368 (491-1044)**

**Client Ref. No. 2002-0804 PUS**

**Inventor: Sippel et al.**

a method for automatically eliminating an error during the operation of an electrographic printing or copying device, comprising the steps of:

upon the occurrence of an error in a component, determining whether the error can be automatically corrected in a main error correction mode;

in case the error can be corrected, switching individual modules to an error-correcting mode in succession;

in case the error cannot be corrected, ending the main error-correcting mode;

querying components in modules in a sequence opposite to that of a printable media transport path, said querying including,

transmitting a command to correct the error to a module,

transmitting a status signal indicating error corrected if the error correction is successful or if no error is present, otherwise transmitting a status signal indicating the error is not corrected;

if the status signal indicating that the error has not been corrected is transmitted, making a determination as to whether operation of the electrographic printing or copying device can proceed without the module that has the error and, if so, transmitting a status signal indicating that operation is possible, otherwise transmitting a status signal that the error is not corrected; and

if after handling all of the affected modules, the status signal indicates that the error has not been corrected in at least one module, then ending the error-correcting mode and reporting the module registering an error, otherwise ending the error-correcting mode and transmitting a status signal indicating the error has been corrected.

22. (New) An electrographic printing or copying device, comprising:

an input for printable media to be printed;

a print module including at least one printable media transport path, said printing modules printing on said printable media;

an output connected to said printing module to receive printed printable media; .

a controller connected to said input and to said print module and to said output to detect an occurrence of an error and determine whether the error can be corrected automatically, said controller switching to error correcting mode in case the error can be corrected, otherwise ending the main error-correcting mode;

testing components in a direction opposite to a media flow path including, commanding a module to correct an error, transmitting a status signal indicating the error has been corrected if the correction is successful or if no error is present, otherwise transmitting a status signal indicating that the error is not corrected;

in case the status signal that the error has not been corrected is transmitted, determining whether operation of the printing or copying device can proceed without the module having the error, then transmitting a status signal indicating operation possible, otherwise transmitting a status signal indicating error not corrected; and

after all affected modules have been queried, ending error-correcting mode if an occurrence of a status signal indicating that an error is not corrected and at least one module persists and reporting an error in the error module, otherwise ending the error-correcting mode and transmitting a status signal indicating error corrected.

23. (New) A computer program product, including a computer program for use in controlling a computer to perform the method comprising the steps of:

a method for automatically eliminating an error during the operation of an electrographic printing or copying device, comprising the steps of:

upon the occurrence of an error in a component, determining whether the error can be automatically corrected in a main error correction mode;

in case the error can be corrected, switching individual modules to an error-correcting mode in succession;

in case the error cannot be corrected, ending the main error-correcting mode;

querying components in modules in a sequence opposite to that of a printable media transport path, said querying including,

transmitting a command to correct the error to a module,

transmitting a status signal indicating error corrected if the error correction is successful or if no error is present, otherwise transmitting a status signal indicating the error is not corrected;

if the status signal indicating that the error has not been corrected is transmitted, making a determination as to whether operation of the electrographic printing or copying device

SUBSTITUTE SPECIFICATION

can proceed without the module that has the error and, if so, transmitting a status signal indicating that operation is possible, otherwise transmitting a status signal that the error is not corrected; and

if after handling all of the affected modules, the status signal indicates that the error has not been corrected in at least one module, then ending the error-correcting mode and reporting the module registering an error, otherwise ending the error-correcting mode and transmitting a status signal indicating the error has been corrected,

## ABSTRACT OF THE DISCLOSURE

Translation / 11 February 2005 / Schultz / 3100 words-

A method is provided for controlling a printer or copier device by which errors, such as paper jams, can be cleared automatically. A controller commands a module having the error to clear the error automatically. The commands are sent to modules beginning at the output of the printer or copier device and moving in a reverse direction to the paper flow direction of the printer or copier so as to automatically clear errors such as paper jams. Status signals indicating whether the error has successfully been cleared are reported back to the controller. A printer or copier for carrying out the method and a computer program for carrying out the method are also disclosed.

CH2\1150869-1-  
CH1\4228181.1

SUBSTITUTE SPECIFICATION



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☒ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**